

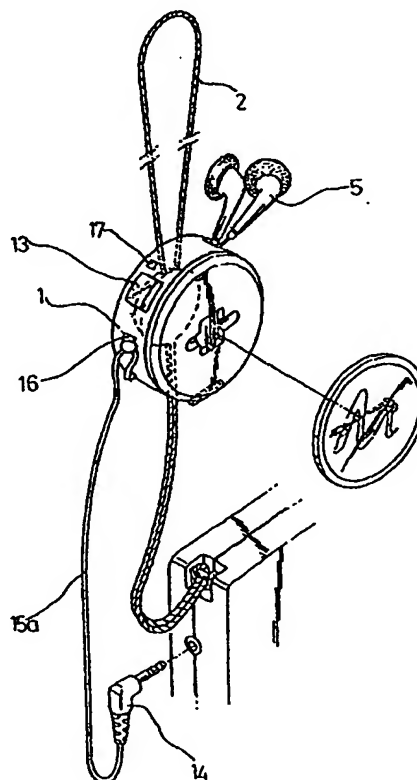


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(21) International Application Number: PCT/KR00/00195 (22) International Filing Date: 9 March 2000 (09.03.00) (30) Priority Data: 1999/7829 9 March 1999 (09.03.99) KR 1999/3733 9 March 1999 (09.03.99) KR 1999/10145 8 June 1999 (08.06.99) KR (71)(72) Applicants and Inventors: PARK, Kyu, Jin [KR/KR]; 103-1206 Dukpoong hyundai Apts., 524, Dukpoong-dong, Hanam-si, Kyungki-do 465-010 (KR). PARK, Tae, Hwan [KR/KR]; 105-402, Samsung 1st apts., 693 Pung- dukcheon-ri, Suji-eup, Yongin-si, Kyungki-do, 449-840 (KR). (74) Agent: LEE, Wan, Hwee; #407 Sungjee Heights 3 Building, 642-6, Yeoksam-dong, Kangnam-ku, Seoul 135-080 (KR).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, DZ, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i> <i>In English translation (filed in Korean).</i>

(54) Title: APPARATUS FOR TAKING A PORTABLE TERMINAL**(57) Abstract**

The present invention relates to an apparatus taking for carrying various portable terminals, such as a portable phone, a language practice receiver, a cassette player to an earphone. The invention is constructed in the form of a necklet which connects to one end of a hanger wire (2) for hanging on the user's neck, the other end of the wire (2) connecting to a portable receiver (3). It may be modified diversely to add functions. The invention, while in carrying, prevents the loss and breaking of the terminal on dropping and also keeps the earphone wire from tangling itself and can add various functions.



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APPARATUS FOR TAKING A PORTABLE TERMINAL

Technical Field

Present invention relates to an apparatus for carrying terminals such as hand-held phones, language practice receivers, or
5 cassette players and for carrying a terminal and a earphone in combinaticen.

Background Art

Various portable terminals are being minimized very fast in size and weight under the development of technology .

10 Subsequently the carriage of them has also come to be simple and convenient to an advantage.

On the other hand, while carrying in a pocked or the like their downsizing inereases the risk of losing or breaking from slipping or dropying out of a pocket or the like.

15 Funther, portable terminals are often used in connection to earphones through wires, the wires however are long in length that in use or in store they are likely to tangle with itself or each other or with another item and are exposred externally to present an untidy appearance to a disadeantage, particularly so on a crowded
20 system of tranrpotaticon.

Accordingly, to obtain a neat appearance, a measure has been sought to prevent breaking or loss of portable terminals.

Disclosure of the Invention

The primary object of the present inventian is to provide an

apparatus which prevents the loss and breaking of various portable terminals arising from carelessness of the carrier person when they come off the keeping place while in carriage.

Another object of the invention, when a terminal is
5 connected to an earphone, is to provide an earphone carrier apparatus to prevent the wire from tangling and bring a neat appearance.

Still another object is to not only employ the above carrier apparatus for terminals and earphones as personal ornaments but
10 also make them perform diverse functions with the terminals.

In order to achieve the above objects, the apparatus of the invention is formed in the shape of a necklet to add various functions including a earphone wire spool and is to have a hanger wire, whose one end being a necklace and the other end connecting
15 to a carrying terminal.

Brief Description of the Drawings

Fig. 1 is a general perspective view of a preferred embodiment of the invention.

Fig. 2 is a partial side section of the embodiment in Fig. 1.

20 Fig. 3 is a view of the first embodiment in use.

Fig. 4 is general perspective view of the second embodiment.

Fig. 5 is a partial view of side section of the embodiment in Fig. 4.

Fig. 6 a and 6b are the views of the embodiment in Fig. 2 in
25 use.

Fig. 7 is a front view of a modification of the first embodiment and the second embodiment.

Fig. 8 is a side section view of the embodiment in Fig. 7.

Fig. 9 is an exemplary perspective view of another modification of the 2nd embodiment.

Fig. 10 is a view of another embodiment of the invention.

Fig. 11 is an exemplary view of the embodiment in Fig. 10
5 in use.

Embodiment 1

As shown in Figs 1 and 2, the invention fastens a hanger wire(2) to the rear side of apparatus(1), one end of the wire arranged to hang on the neck and the other end to be fastened to
10 the terminal for carrying.

The hanger wire(2) is linked on a known wire takeup(4) provided on the rear side and is to be adjusted up-down for the length.

The front face of the apparatus(1) is to be composed
15 diversely in shape, pattern and color for itself to be a personal ornament, and as shown in Fig. 2, the apparatus(1) is provided with a lid(8) hinged at a part(7) to open pivotingly and form a room for receiving a picture, a mirror(11) for setting in or for housing a simple compact. Besides, the front face of the apparatus may be
20 provided with a fastener to detachably attach a separate or personal ornament(k) or a tag with a fastener(9).

According to the invention as shown in Fig. 3, a terminal(3) is fastened to a hanger wire on the user's neck so that even if it slips off its keeping place such as a pocket on the jacket, the
25 terminal still stays on the body without dropping off the body in separation to lose or breaking. The apparatus also having the effect of being an ornament like a necklet can possess a function of housing for a picture, mirror, radio earphone or compact or be used

as an identification tag or plate or be combined with a lighter or another utensil.

Embodiment 2

5 The present embodiment is designed to be useful to carry a terminal and an earphone to use them in combination and its structure basically is the same as that of the prior embodiment.

But it has an addition of an earphone carrier device that keeps the earphone wire from tangling to keep the wire always neat in appearance.

10 Referring to Figs. 4 and 5, the apparatus case(1) of the embodiment fastens a hanger wire(2) to the case(1) which is formed with a room to house a spool for the earphone wire. The winding operation of the wire is executed by manipulation of a switch(13). The apparatus(1) has on its side an adjuster(16)
15 attached for adjusting the length of the lower wire(15a) having a phone plug(14) attached at the end. The adjuster(16) consists of a bar part for winding the wire on it and a lock in the form of a cover for preventing the unroll of wire in winding. The earphone may selectively have a microphone as needed.

20 On the other hand, the apparatus houses, in addition to the prior mentioned winding spool(12), various items previously described for the embodiment 1 in its inner chamber, or houses and installs diverse devices which will be described later to add various functions to the apparatus.

25 Referring to Figs. 6a and 6b showing the use of the embodiments, Fig 6a shows that the phone plug(14) fastened to an end of the wire(15a) is inserted into the terminal for connection, and the earphone(5) is pulled for the wire to be drawn from the

apparatus to be fitted in the ear, and after use, the manipulation of the switch(13) automatically winds the earphone wire(15) on the wind spool(12) in the apparatus(1).

The apparatus(1) is also provided with a switch(17) to
5 operate on/off for signal communication between the earphone and microphone and the terminal.

According to the invention, the embodiment I prevents the loss or breaking of the terminal, houses or combines simple items, and has the function of a personal ornament for various effects, and
10 further the earphone wire while in use or in keeping is prevented from tangling to keep neat and orderly appearance, advantage. The effects of the invention will be more remarkable when the embodiment is employed for use in a complex mass transportation system.

15 Embodiment 3

This embodiment is a modification of the prior embodiments 2 and 2 which is to carry a terminal inserted into a case attached to the apparatus.

Referring to Figs. 7 and 8, the embodiment is structured that
20 the apparatus(1) has at its lower end a terminal fastener(18) in a particular shape, for example, a necktie, to have a terminal housing case(19) on its back side for housing a terminal(3).

The inner face of the terminal housing case(15) is preferably covered by a fabric or by a coating for electromagnetic wave shield.

25 The apparatus(1) for this embodiment may be constructed in the same way as those of embodiments 1 and 2. That is, depending on carrying solely a terminal or carrying a terminal and an earphone in combination, the embodiment may be constructed as suited. Only

difference from the embodiments 1 and 2 is that a hanger wire(1) is connected to the apparatus(1) instead of connecting to the terminal.

Fig. 9 shows another modification of the embodiment 2 having a terminal housing case(19) on the back side of the
5 apparatus(1), and the hanger wire(2) connecting to the terminal case(19) instead of connecting to the apparatus(1).

Fig. 9 shows another modification of the embodiment 2 having a terminal housing case(19) on the back side of the apparatus(1), and the hanger wire(2) connecting to the terminal
10 case(19) instead of connecting to the apparatus(1).

Also, the apparatus(1) and the terminal case(19) are arranged to detachably combine with each other, the attachment being made with a known both-side adhesive tape to be detachable.

According to the invention, the embodiment, brings the effect
15 of preventing the loss or breaking of the terminal and the tangling of the earphone wire and further adds convenience in use by combining the terminal and the apparatus closer together for an integral unit.

Embodiment 4

20 Present embodiment discloses an apparatus(1) having diverse functions in addition to the carrying of a terminal and an earphone.

1. The apparatus houses a miniature radio or other radio receiver in its inner room and mounts on the outer side a selector for radio tuning and turning power on/off.

25 2. The apparatus is partially or wholly formed into a polymer battery to be utilized as a reserve power source.

3. The apparatus houses a voice recognition circuit to

connect to a portable phone and terminal so that their dialing and other functions are automatically executed under voice commands.

4. The apparatus can mount a switch for manipulation of mute function to temporarily stop telephone communication.

- 5 5. The apparatus has an amplifier and phone jack attached to it to connect two or more apparatuses mutually to each other so that a plurality of users simultaneously talk or hear. That is, the apparatus houses a switch(20) connecting to a phone plug(14), an amplifier(21), a telephone line connector (22), a phone jack(23)
- 10 connecting to the connector(22). and the phone plug connects to a terminal. The phone jack is connected to the phone plug of another apparatus, two or more persons can simultaneously make voice communication or hear voices. The line connector(22) is a circuit connecting in parallel to connect the signal coming via the
- 15 switch(20) to a earphone and phone jack.

Claims :

1. An apparatus for taking a portable terminal, having a hanger wire whose one end fixed to the back of the apparatus and the other end electrically connected to the terminal.
- 5 2. An apparatus as set forth in Claim 1 wherein the hanger wire is adjustable in length by a known wire take-up for the position of the apparatus.
3. An apparatus as set forth in Claim 1 wherein a lid is hinged on the apparatus to pivotally operate and form an inner
10 chamber for receiving small items in it.
4. An apparatus as set forth in claim 3 wherein the inner chamber has a mirror affixed to the inner surface.
5. An apparatus as set forth in Claim 3, wherein a wireless earphone is housed in the chamber.
- 15 6. An apparatus as set forth in claim 1 or 3, wherein the apparatus has a fastener on the front face to detachably attach an ornament and/or an identification tag.
- 20 7. An apparatus for taking a terminal and an earphone wherein the apparatus is formed to have a hollow in it to fix an earphone wire winding set and is provided with a hanger wire fastened to the rear side, one end of the wire being worn on the neck of the user and the other end connecting to the terminal in

carrying.

8. An apparatus as set forth in Claim 7. wherein the hanger wire is adjustable in length by a known take-up for the position of the apparatus.

5 9. An apparatus as set forth in Claim 7. wherein the apparatus is provided with a lid hinged on it to pivotally actuate.

10 10. An apparatus as set forth in Claim 9 wherein the lid has a mirror affixed to its inner face.

10 11. An apparatus as set forth in Claim 9 wherein the lid has a fastener on its front surface to removably attach an ornament or an indentification tag.

15 12. An apparatus as set forth in Claim 7 wherein the apparatus has a switch for switching signal on/off between the earphone and microphone and the terminal.

15 13. An apparatus, for taking a portable terminal, which is provided on its top with a hanger wire for hanging on the neck of the user, and on the bottom with a terminal fastener and on the back with a terminal housing for receiving a terminal.

20 14. An apparatus as set forth in Claim 1 or 13 wherein the apparatus incorporates a lighter in combination.

 15. An apparatus as set forth in Claim 1 or 13, wherein the apparatus has a compact holder in combination.

16. An apparatus as set forth in Claim 13, wherein the terminal housing has its inner surface treated for electromagnetic wave shield.

5 17. An apparatus as set forth in Claim 13, wherein a lid is hinged on the apparatus for pivotal actuation to form a chamber to house small items in it.

18. An apparatus as set forth in Claim 17, wherein a mirror is affixed to the inner side.

10 19. An apparatus as set forth in Claim 17, wherein its chamber houses a wireless earphone.

20. An apparatus as set forth in Claim 13, wherein a fastener is provided on its front side for removaly attaching an ornament and/or an identification tag.

15 21. An apparatus set forth in Claim 17, wherein the lid has on its front face a fastener to detachably attach an ornament and/or identification tag.

20 22. An apparatus for taking a terminal and earphone wherein the carrier houses an earphone wire winding set in it, equips on its top a hanger wire to hang on the neck of the user, has on the bottom a fastener for attaching a terminal which is housed in a terminal case on the back side.

23. An apparatus for taking an terminal and an earphone, which houses an earphone wire winding set in it and is provided on

its back with a terminal housing case having a hanger wire.

24. An apparatus as set forth in Claim 7, 22, or 23, which is provided on a side with a wire length adjuster for the lower portion of the wire.

5 25. An apparatus as set forth in Claim 7, 22, or 23, which incorporates a lighter.

26. Apparatus as set forth in Claim 7, 22, 23, wherein a compact holder is provided.

10 27. An apparatus as set forth in Claim 23, wherein a terminal housing case is removably attached to it.

28. An apparatus as set forth in Claim 22 or 23, wherein a terminal housing case has its inner surface treated for electromegnetic wave shield.

15 29. An apparatus as set forth in Claim 22, wherein a lid is hinged to it to pivotally actuate.

30. An apparatus as set forth in Claim 22 or 23 wherein a fastener in its front removably attaches an ornament and/or an identification tag.

20 31. An apparatus as set forth in Claim 29 wherein the lid has in its front a fastener for removably fastening an ornament and/or a tag.

32. An apparatus as set forth in Claim 22 or 23, which is provided with a switch for operating on/off for signals between the earphone and microphone and the terminal.

5 33. An apparatus as set forth in Claim 1 or 13, which houses a radio receiver in it and is provided on the outer side with a selector for radio tuning and operating on/off for power.

34. An apparatus as set forth in Claim 7, 22 or 23, which houses a radio receiver in it and is provided on the outer side with a selector for radio tuning and operating on/off for power.

10 35. An apparatus as set forth in Claim 1 or 12, which is formed into a polymer battery.

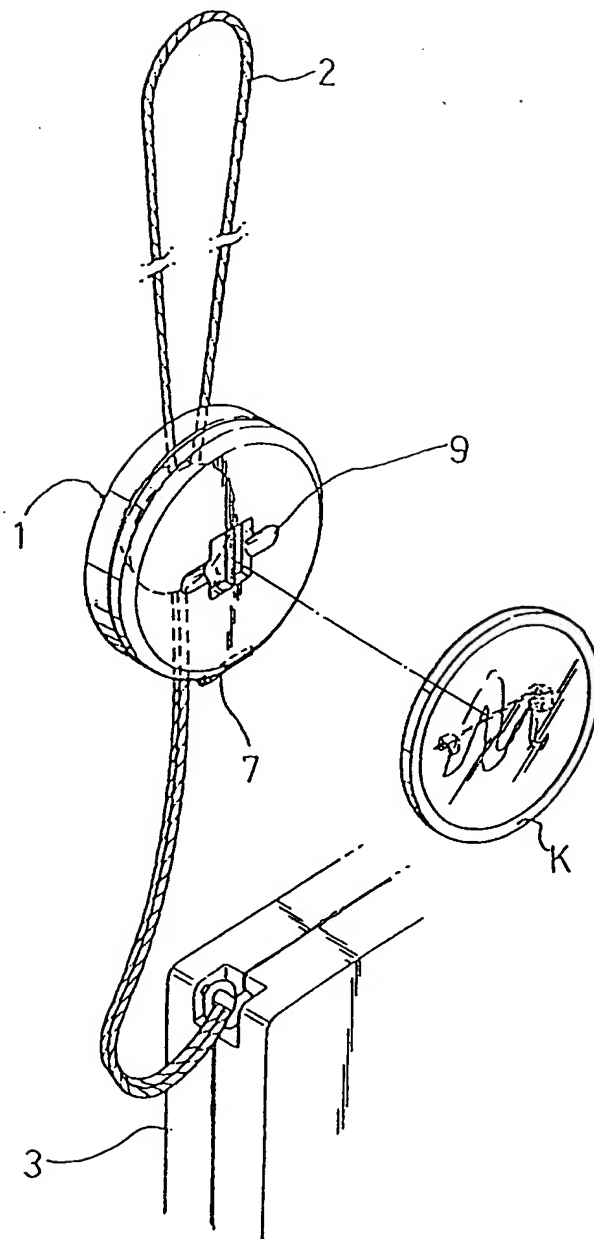
36. An apparatus as set forth in Claim 7, 22, or 23 which is formed into a polymer battery.

15 37. An apparatus as set forth in Claim 9, 22, or 23, which has a voice recognition circuit housed in it.

38. An apparatus as set forth in Claim 7, 22 or 23, which is provided with a switch for manipulating mute function to temporarily stop communication.

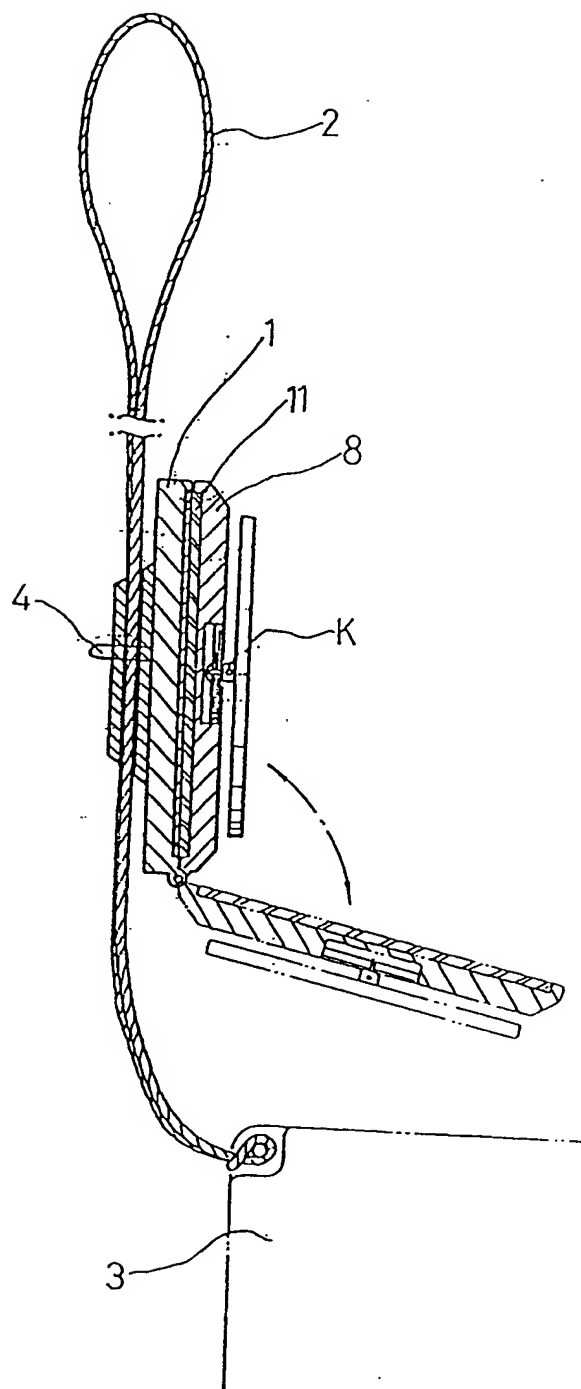
20 39. An apparatus as set forth in Claim 7, 22 or 23, which has an amplifier in it and a phone jack on the outer side.

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FIG. 1



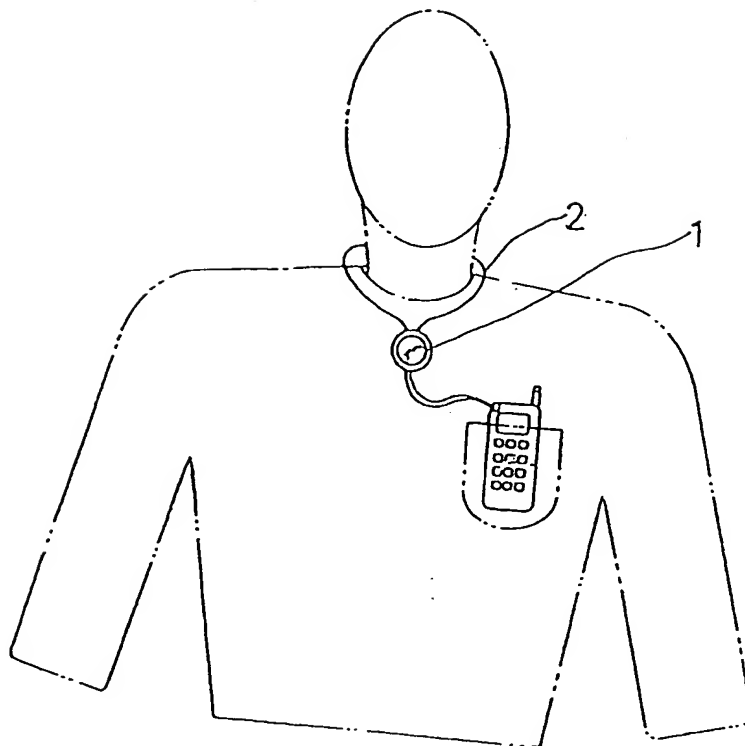
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FIG. 2



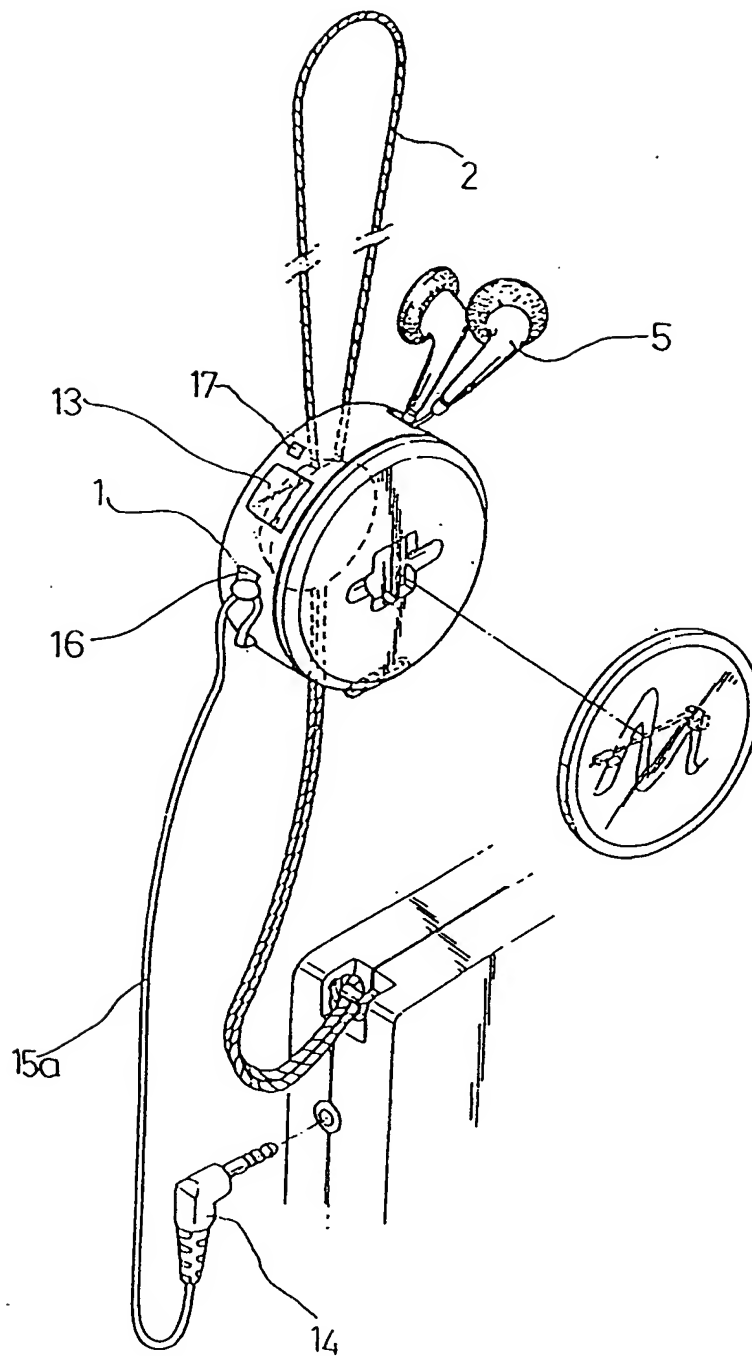
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FIG. 3

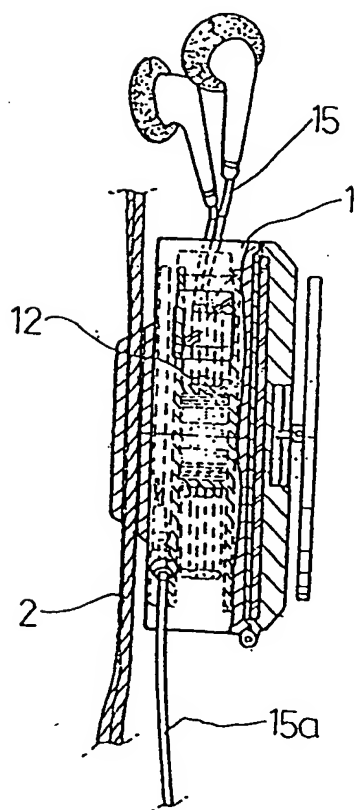


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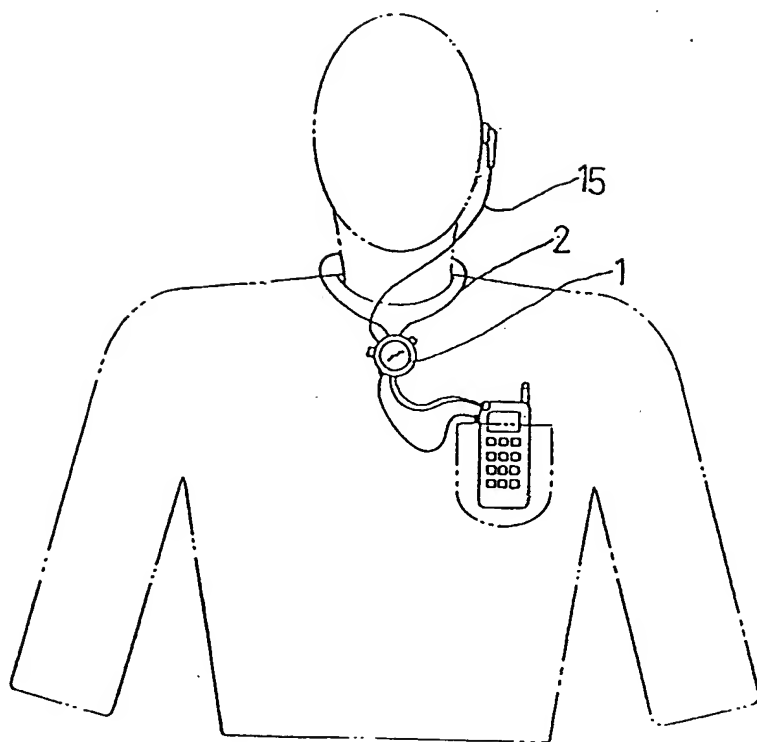
FIG. 4



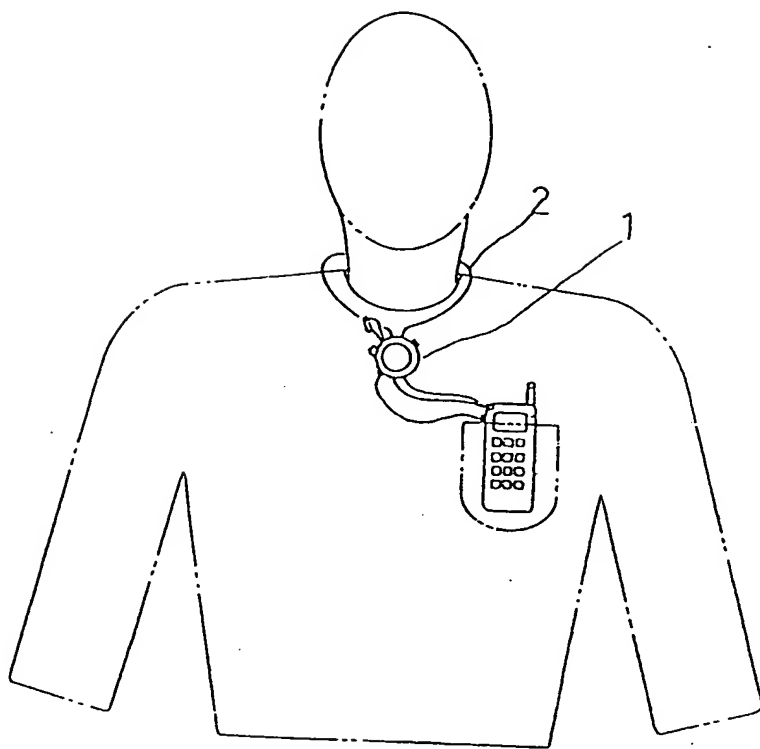
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FIG. 5



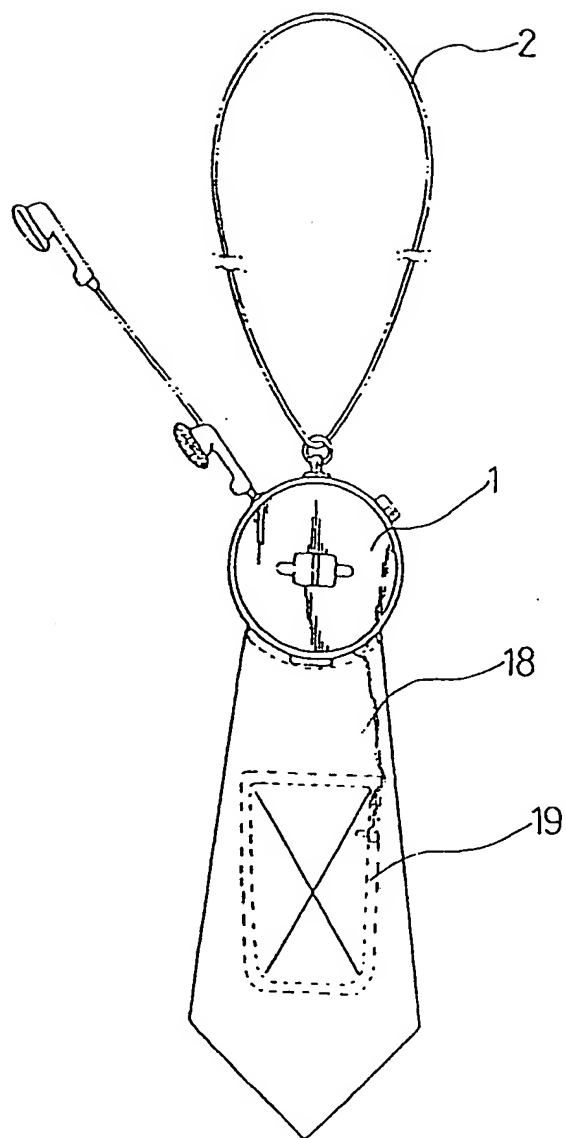
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FIG. 6a



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FIG. 6b

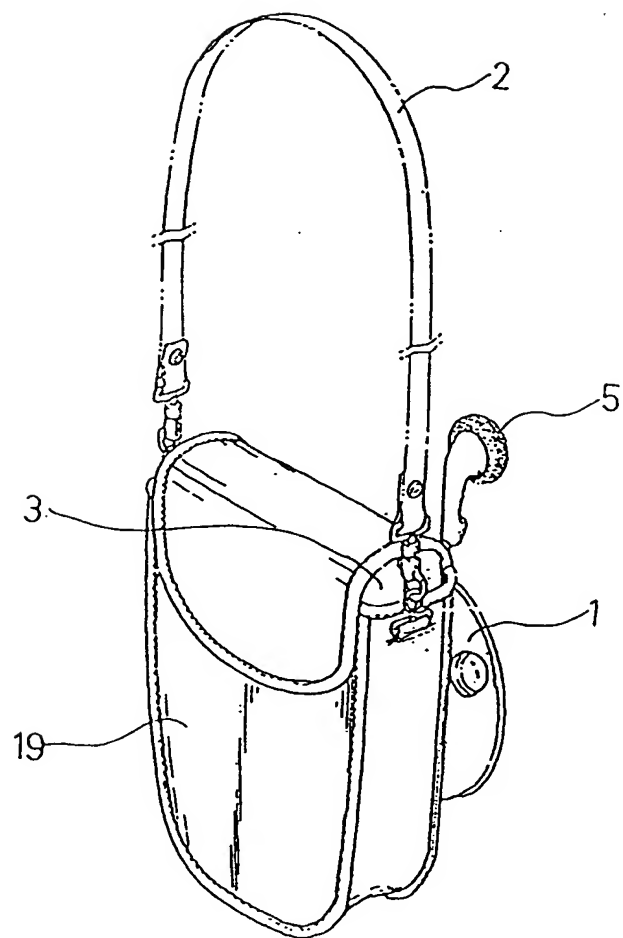


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FIG. 7

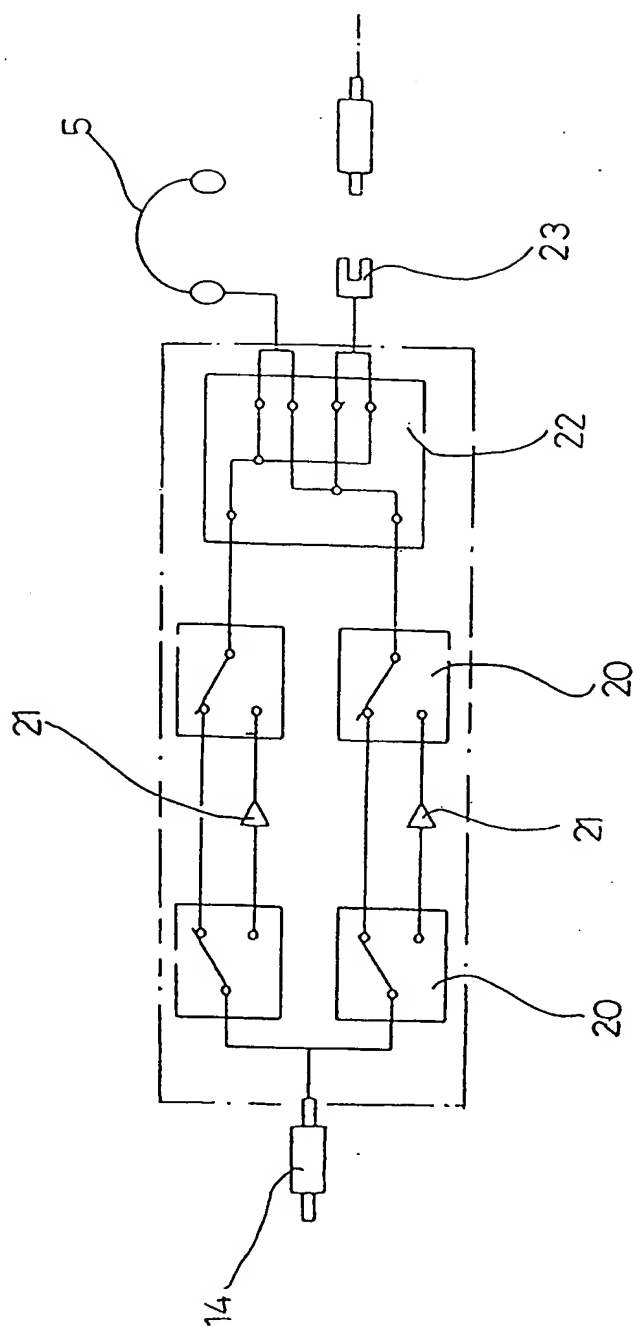


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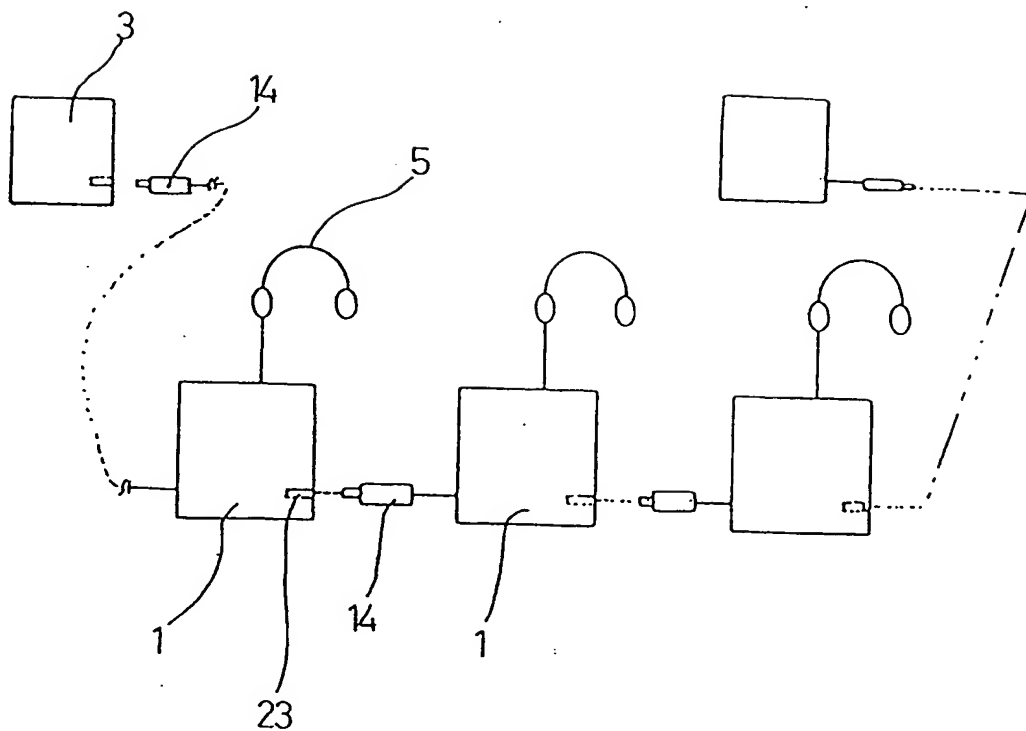
FIG. 9



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FIG. 10



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FIG. 11



INTERNATIONAL SEARCH REPORT

international application No.

PCT/KR00/00195

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H04B 1/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H04B 1/38, 7/26 ; H01Q 1/24, 7/00 ; H04Q 7/38 ; H04M 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Japanese Utility and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

FPD, PAJ, PATROM

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,677,948 A (Eta SA Fabriques d'Ebanches) 14 Oct. 1997 See abstract and fig.2	1
Y		2,5,7,8
X	JP10-22863 A (NOKIA MOBILE PHONES LTD.) 23 JAN. 1998 See abstract and fig. 2	1
Y		2,5,7,8
Y	KR 95-22525 U (KOTOBUKI) 18. Aug. 1995 See abstract and fig. 1	2,8
Y	KR 98-71968 A (Choon-Soo, Lee) 26. Oct. 1998 See abstract and Fig.1	5,7,8

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search

30 JUNE 2000 (30.06.2000)

Date of mailing of the international search report

10 JULY 2000 (10.07.2000)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR00/00195

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5,677,948 A	14.10.1997	JP 8079349 A2	22.03.96
		FR 2724080 B1	20.12.96
		EP 698984 A1	28.02.96
		CN 1119381 A	27.03.96
JP 10-22863	23.01.1998	GB 789474	13.08.97
		FI 101662 B1	31.07.98
		EP 789474 A3	12.01.00
		DE 789474	13.08.97
KR 95-22525 U	18.08.1995	NONE	
KR 98-71968 A	26.10.1998	NONE	